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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,309	04/07/2004	Tapan Chandra	132527-1	7448
23413	7590	07/12/2007		
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			EXAMINER RONESI, VICKEY M	
			ART UNIT 1714	PAPER NUMBER
			MAIL DATE 07/12/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/820,309

Applicant(s)

CHANDRA ET AL.

Examiner

Vickey Ronesi

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1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2007.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-17 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. All outstanding rejections are withdrawn in light of applicant's amendment filed on 4/26/2007.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.
3. The new grounds of rejection set forth below are necessitated by applicant's amendment filed on 4/26/2007. In particular, claims 1, 13, and 14 have been amended to recite a polymer with pendant epoxy groups having subunits of formula (II). Thus, the following action is properly made final.

### *Claim Objections*

4. Claims 1, 10, and 14 are objected to because of the following reasons:

With respect to claim 1, line 3, the article before "electrically conductive filler" should be "an".

With respect to claim 1, line 6, the term "the" should be inserted before "polymers with pendant epoxy groups" because it has antecedent basis.

With respect to claim 1, last line, the phrase ", and" should be delete.

With respect to claim 10 line 13, the term "the" should be inserted before "polymers with pendant epoxy groups" because it has antecedent basis.

With respect to claim 14 line 8, the term "the" should be inserted before "polymers with pendant epoxy groups" because it has antecedent basis.

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With respect to claim 14, line 9 and the last line, the additional periods, “.”, should be deleted.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. Claims 1, 13, and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 1, 13, and 14, formula (II) causes confusion because it is not made clear to what the two open-ended bond of  $R^3$  are bonded. In other words, is  $R^3$  in the backbone or does the repeat unit only contain the glycidyl ether functionality? Support in the specification is only given for the former. In the interest of compact prosecution and to interpret the claims in their broadest light, the latter definition is used for the following prior art rejections.

With respect to claims 3-12, 15-17, and 19, they are rejected for being dependent on a rejected claim.

***Claim Rejections - 35 USC § 103***

6. Claims 1, 3-4, 6-8, 11-16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishio et al (US 5,112,907) in view of Silvi et al (US 5,843,340, cited on IDS dated 7/22/2004).

Nishio et al discloses a thermoplastic resin composition for use in molded articles (col. 7, line 67 to col. 8, line 12) comprising 5-95 wt % polyarylene ether (col. 13, lines 3-20) which can

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be functionalized (col. 3, lines 42-51); 5-95 wt % polyamide such as polyamide 6 (nylon-6), polyamide 6, 6 (nylon-6,6), etc (col. 3, line 52 to col. 4, line 12); 0.1-50 wt % epoxy group-containing copolymers of formula (2) and carboxylic acids (col. 6, lines 17-68); and 5-100 parts by weight of an impact modifier per 100 parts by weight of polyarylene ether and polyamide (col. 4, lines 40-48) containing acrylic acid which compatibilizes the blend (col. 5, lines 58-62); and optionally an antioxidant (col. 7, lines 36-37).

Nishio et al teaches the use of inorganic fillers such as carbon black (col. 7, line 34) and the use of its composition in automotive molded articles (col. 8, lines 2-6), however, it fails to disclose the use of electrically conductive filler such as conductive carbon black.

Silvi et al discloses a conductive polyphenylene ether/polyamide composition and teaches that these blends are widely used in automotive molded articles because it is common to use electrostatic powder coating for its convenience and environmental advantages, wherein electrostatic powder coating requires a relatively high surface electrical conductivity (col. 1, lines 6-30). Usually, the amount of carbon black is the amount necessary to afford a composition of the desired conductivity and is in the range of about 1-5.0 parts by weight per 100 parts by resin (col. 5, lines 1-8).

Given that the molded articles of Nishio et al are used in automotive parts and further given that Silvi et al teaches that automotive parts are desirably coated by electrostatic coating, it would have been obvious to one of ordinary skill in the art to utilize a conductive filler in the composition of Nishio et al in order for it to be coated by electrostatic coating.

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7. Claims 5, 9, 10, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishio et al (US 5,112,907) in view of Silvi et al (US 5,843,340, cited on IDS dated 7/22/2004) and further in view of Bastiaens et al (US 6,353,050, cited on IDS dated 7/22/2004).

The discussion with respect to Nishio et al and Silvi et al in paragraph 6 above is incorporated here by reference.

Nishio et al fails to disclose the use of a polyester ionomer, specific antioxidants, or a metal salt, however, note in col. 7, lines 28-39 where Nishio et al teaches the use of suitable additives.

With respect to the polyester ionomer, Bastiaens et al discloses a thermoplastic composition comprising compatibilized polyarylene ether/polyamide and teaches that adding polyester ionomer results in a composition having reduced moisture absorption and improved paint adhesion (abstract). Given the advantages had by using a polyester ionomer as taught by Bastiaens et al, it would have been obvious to one of ordinary skill in the art to utilize a polyester ionomer as an adhesion promoter in the composition of Nishio et al.

With respect to specific antioxidants, Bastiaens et al teaches that suitable antioxidants in a composition comprising compatibilized polyarylene ether/polyamide includes those listed in col. 12, lines 38-56. Given the Nishio et al discloses the desired use of antioxidants, it would have been obvious to one of ordinary skill in the art to utilize the suitable antioxidants taught by Bastiaens et al.

With respect to a metal salt, Bastiaens et al teaches that metal salts are used as stabilizers in a composition comprising compatibilized polyarylene ether/polyamide (col. 12, line 57 to col. 13, line 22). Therefore, in order to stabilize the composition of Nishio et al, it would have been

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obvious to one of ordinary skill in the art to add a metal salt to the composition of Nishio et al as taught by Bastiaens et al.

*Response to Arguments*

8. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

7/6/2007

Vickey Ronesi



/Vasu Jagannathan/  
Supervisory Patent Examiner  
Technology Center 1700